the sun's parallax by observation of Victoria and Sappho. I have already commenced the preliminary work, and I anticipate that much time will be devoted thereto in the ensuing autumn.

ROBERT S. BALL

SCIENCE IN BOHEMIA

A CORRESPONDENT, who was present at the recent meeting of the Bohemian Naturalists, sends us the following brief report:—

The second meeting of Bohemian Naturalists and Physicians was held during May 24–30 in Prague (NATURE, vol. xxvi. p. 66). This meeting, in which over 600 members (some of them coming from Poland) took part, seems to have proved sufficiently that the above-named Slavic tribe (counting only something over six millions of souls) is not less successful in cultivating and promoting science in its own language, than other small nations (Dutch, Swedes, &c.).

In the two general meetings the following addresses were given:—By Dr. Schafarik, Professor in the Bohemian University, on the aims of chemical investigation, in which the subject was treated from an unusually deep and philosophic point of view; and by Dr. Holub, on the importance of the medical profession in transatlantic countries. In this address the essayist pointed out that the great power which had been obtained by the English in transatlantic countries is especially due to the investigations made by them from the scientific, commercial, economical, and strategical point of view. Dr. Holub further referred to other experiences of that kind, which he made in his travels in South Africa, already known to the readers of NATURE (vol. xxiv. pp. 35-38).

In the Section for Medicine, papers were read by the following gentlemen:—Doctors Eiselt, Janovsky, Maixner, Drozda, Thomayer, Chodounsky, Hlava, Wiktor, Zahor, Pelc, Böhm, Belohradsky, Ehrmann, Carda, Krasinski, Chudoba, Mayzel, Steffal, Wach.

In the Section for Surgery, papers were read by Doctors Schoebel, Obtulowicz, Janovsky, Janda, Kuniewicz, Michl, Medal, Talko, Weiss, Bastyr, Jerzykowski, Ostrcil, Carda, Michl, Matlakowski, Spott, Maixner, Skalicka.

In the Section for Pharmacy, papers were read by Doctors Belohoubek, Jandous, Fragner, and Stepanek.

In the Section for Mathematics and Physics, Dr. E. Weyr read a paper on the construction of a hyperboloid of osculation; J. Vanecek, on general inversion; V. Jaeger, on the solution of equations of 4th degree; K. V. Zenger, on a dispersive parallelopipedon, and on microscopes with endomersic lenses; Dr. Doubrava, on sensitive flames; Dr. Becka, on comets; F. Machovec, on the construction of certain curves; Dr. Weyr, on the construction of rational curves in space, of third, fourth, fifth, and sixth degrees; B. Prochazka, generalisation of stereographic sections of planes of second degree; A. Sucharda, on movements of curved planes; F. Toms, construction of section lines of two conic sections; F. Cechac, contributions to electrotechnics; Dr. A. Seydler, on the use of quaternions for the solution of a certain mechanical problem; Dr. V. Strouhal, on the peculiarities of magnetic and galvanic steel; E. Dziewulski, electric conductivity of mixtures of alcohol and water.

In the Section for Natural Science, papers were read by Dr. Celakovsky, on the sympodial constitution of vine-branches; J. Szyszylowicz, on the influence of light upon the transformation of matter in plants; F. Bayer, on the asymmetry in the shoulder-blade circle of frogs and some birds; V. T. Velenovsky, on the flora of Bohemian chalk-formation; Dr. Palacky, on the relations of the American and Bohemian flora; F. Sitensky, on the turfs from the giant mountains; K. Cermak, on the stratification of the alluvium and diluvium in certain parts of Bohemia, the fauna of these strata, and their deposition over older formations; Dr. Mayzl, on the division of cells; Dr. Fric, on the Sauria found in the permic formation of Bohemia; F. Safranek, on a new rock found near Tabor (Bohemia); J. Korensky, on the diluvial fauna from the rock-cave near Tetin; J. Kafka, on Bohemian bryozoa; Dr. Woldrich, on the diluvial system of Central Europe; G. Ossowski, geology of Wolonia; Dr. Novak, contributions to the fauna of Bohemian Siluric formation; J. Fric, contribution to the ontogeny of Copepoda; Dr. Kamienski, contribution to the morphology of the urticularii; J. Ssyszylowicz, conservation of spores of plants during the winter; K. Taranek, on rhizopoda and diatomacæa of South Bohemian turfs; S. Klnava, criteria of modern petrology; Dr. Celakovsky, comparison of indusia of ferns and oval integumenta; F. Safranek, on a new find of opals and chalcedons near Tabor; Dr. Vejdovsky, on the male of *Lernæpoda selachiorum*, and on Bohemian Planariæ; Dr. Hansgirg, on Bohemian Algæ, and on the movements of Oscillariæ; J. Ulicny, on Moravian Molusca; Dr. Zulinski, on mineralogical symbolics; Dr. Palacky, on the flora in the Bohemian chalk formation; C. Zahalka, geological map of the environments of Jicin; Dr. Kamienski, growth of plants in an atmosphere not containing carbon dioxide; F. Posepny, on the disintegration of rocks; Dr. Rostafinski, on the distribution of Galician fishes, and on the formation of hormogonia.

In the Chemical Section papers were read by Prof. Butleroff, on the oxidation of isodibutylene by potassium permanganate (presented); Dr. Radziszewski, on physiological oxidation; F. Stolba, application of aluminium-metal in laboratories; A. Belohoubek, on crystallised hydrates of potassium; Dr. B. Brauner (Manchester), on the atomic weight of didymium and other researches, regarding the chemistry of rare earth-metals (presented); F. Chodounsky, on fermentation; Prof. Preis, on sodium sulfarsenite; Dr. Janecek, on the electrolysis of saline solutions; Dr. Wasowicz, on crotaconic acid; Farsky, on superphosphates; K. Kruis, fermentation in spirit-refineries; M. Fischer, on the decomposition of collagenous substances; J. Stoklasa, on the geochemical conditions of Bohemian chalk-formation; Jal, on the estimation of hypophosphorous acid; J. Wiesner, on potassium-uranic chromates; K. Sykora, on certain coloured clays found in Bohemia, B. Rayman, on a new synthesis of methyl-phenyles; Farsky, chlorine as a nutriment of plants.

In the Section for Archæology and Anthropology, papers were read by Dr. Woldrich, on the skulls of prehistoric domestic dogs; J. Ossowski, on the objects found in caves near Cracow; Dr. Berger, on fibulæ found in Bohemia; Dr. Kopernicki, on the trepanation of prehistoric skulls in Bohemia; B. Jelinek, on the environments of Plesivec.

In the Section for Pædagogy the following papers were read or subjects discussed:—Dr. Hejzlar, how to teach physics and astronomy; F. Nekut, how to teach mineralogy; J. Mrazik, on the services rendered to pædagogy by medicine and natural science; J. Vanecek, necessity of teaching new geometry in middle schools; Dr. Kotal, on the treatises of natural science used in middle schools; J. Klika, how to popularise natural science; Pokorny, on teaching of gymnastics.

In an exhibition connected with the meeting many interesting objects touching upon Medicine and Natural Science were exhibited. From the scientific excursions by which the meeting was concluded only that into the well-known mine of Pribram, under the direction of Prof. Krejci, may be mentioned.

Only within recent years Natural Science began to be cultivated in Bohemia in the Slav language, and this is especially due to the establishment of a Bohemian Polytechnic School and recently of a corresponding division in the University of Prague though the last-named high school was founded already in 1348.

INDIA-RUBBER PLANTS

MR. W. T. THISELTON DYER brought before the Linnean Society, June 15, an important communication on the caoutchouc-yielding Apocynaceæ of Malaya and Tropical Africa. After giving a general sketch of the structural and physiological conditions of the occurrence of caoutchouc in plants, the author pointed out that the plants which appeared to yield it in commercial quantity in three widely-separated regions all belonged to one tribe of Apocynaceæ, the *Carisseæ*. In the East Indies the "gutta singgarip" of the Malay Peninsula, the "gutta soosoo" of Borneo, was the produce of a new species *Willughbeia, W. Burbidgei*. Many other species of this and allied genera also seemed to produce caoutchouc in quantity, worth collection. In Central Africa *Landolphia*, which was closely allied to *Willughbeia*, but differed in possessing terminal instead of axillary flowers, was the most important source. On the East Coast caoutchouc was yielded by *L. owariensis* and *L. florida*, the latter a very ornamental plant. As the rubber exuded from the cut stems, it was plastered by the collectors on the breast and arms, and the thick layer, when peeled off and cut up into squares, was called "thimble rubber." On the west coast the most important species was *L. Kirkii*, the rubber of which could be wound off into balls or small rolls from the cut stems, like

silk from a cocoon; this species was called "Matere." *L. florida* also occurred, and was called "m'bunga"; its rubber was worked up into balls, but was inferior in value. The rubber of *L. Petersiana* was of little importance. In South America *Hancornia speciosa* yielded what was called "mangabeira rubber."

UNIVERSITY AND EDUCATIONAL INTELLIGENCE

AT the summer commencements of the University of Dublin, held on June 29 last, the degree of LL.D. Honoris causâ was conferred on Dr. Siemens and on Mr. Alfred Russel Wallace.

At a special meeting of the Council of the University of Dublin, held on June 30, Mr. Robert Crauford was nominated for the important post of Professor of Engineering in the University. Mr. Craufurd is well known for his many fine engineering works successfully carried out in North and South America, and in Europe.

UNIVERSITY COLLEGE, BRISTOL.—The new wing of the permanent buildings of University College, Bristol, is now rising rapidly. The portion devoted to physical and engineering laboratories and lecture-rooms will be ready for occupancy in October; the new chemical laboratories and lecture-rooms will be completed before Christmas. This greatly-needed extension will not, however, meet all the requirements of the growing institution, and additional buildings to accommodate the medical faculty are greatly wanted. One of the laboratories of the Physical Department is to be fitted up as an electrical laboratory. Prof. Thompson is actively endeavouring to raise funds for its complete outfit. Mr. C. C. Starling has been appointed Demonstrator in Physics.

SOCIETIES AND ACADEMIES

LONDON

Royal Society, June 15.—"On the Specific Heat, and Heat of Transformation, of the Iodide of Silver, AgI, and of the Alloys $Cu_2I_2.AgI$; $Cu_2I_2.2AgI$; $Cu_2I_2.3AgI$; $Cu_2I_2.4AgI$; $Cu_2I_2.12AgI$; $PbI_2.AgI$." By Sigr. Manfredo Bellati and Dr. R. Romanese, Professors in the University of Padua.

The authors have determined the specific heat, and heat of transformation, of iodide of silver, and of five alloys or compounds of that substance with iodide of copper, and one with iodide of lead. The substances have already been studied by Mr. G. F. Rodwell as regards their expansion and contraction on heating, and the results communicated to the Royal Society; the same specimens were transmitted to Padua for the experiments of Prof. Bellati and Romanese. The following results were obtained. θ_1 and θ_2 are the temperatures at which change of molecular structure respectively commences and finishes; c the mean specific heat between t and T for temperatures below θ_1; c_1 specific heat for temperatures above θ_2; and λ the heat absorbed by the unit weight of the substance in consequence of change of structure.

Composition of the substance.	Percentage of AgI.	θ_1.	θ_2.	c.	c_1.	λ
		C.	C.			
AgI.....	100·0	142°	156°·5	$0·054389+0·0000372(T+t)$	0·0577	6·25
$Cu_2I_2.12AgI$	88·1	95	228	0·05882 (from 16° to 89°)...	0·0580	8 31
$Cu_2I_2.4AgI$	71·2	180	282	$0·056526+0·0000410(T+t)$	0·0702	7·95
$Cu_2I_2.3AgI$	65·0	194	280	$0·059624+0·0000280(T+t)$	0·0726	7·74
$Cu_2I_2.2AgI$	55·3	221	298	$0·061035+0·0000295(T+t)$	...	7·88
$Cu_2I_2.AgI$...	38 2	256	324	$0·063099+0·0000260(T+t)$	...	8·67
$PbI_2.AgI$ ...	33·8	118	144	$0·047458+0·0000026(T+t)$	0·0567	2·556

The results are compared and discussed, and inferences are drawn therefrom as to the constitution of the bodies experimented upon.

Geological Society, June 7.—J. W. Hulke, F.R.S., president, in the chair.—Alfred Morris, C.E., and William Henry Watson were elected Fellows of the Society. Prof. Louis Lartet of Toulouse was proposed as a Foreign Correspondent of the Society. The following communications were read:—The President read the following note, forwarded by Don Manuel F. de Castro, Director of the Geological Survey of Spain:—"On the Discovery of Triassic fossils in the Sierra de Gador, Province of Almeria, Spain. The metalliferous limestone of the Sierra de Gador, owing to no fossil remains having been found prior to this occasion, has been a perfect puzzle to all geologists for the last fifty years. MM. Maestre, Amar de la Torre, Pernolet, Ansted, and Cooke considered these limestones to belong to the Transition series, the former taking it as a representative of the Mountain Limestones of other parts of Europe. M. Prado hinted that they might be Devonian; whilst M. Willkomm, in the geological map published to accompany his botanical researches in Spain, considered them Silurian. Lately MM. Botella and Vilanova, in their respective maps, have marked them as belonging to the Permian series, whilst M. de Verneuil, coming nearer to the truth, took the whole of the limestones to the south of Granada and the Sierra de Gador as Triassic, though in doubt ('Trias incertain') Under these circumstances I was commissioned by the Director of the Geological Survey of Spain to investigate the south-west portion of the Province of Almeria, which comprises the Sierra de Gador. In February last I had the good fortune of discovering abundant fossil remains in different parts of the Sierra de Gador, which perfectly fix the age of the metalliferous limestones of this part of Spain. The whole series of rocks forming this *sierra*, resting on the mica-schists and slates of the Sierra Nevada, is a succession of black, white, and purple talcose schists at the base, which alternate with some beds of yellowish and porous limestone, and which pass through a considerable thickness of grey limestones and slates, and precisely where the fossils have been found, to the metalliferous limestone of Sierra de Gador, which appears to form the top of this interesting formation. The fossils found belong to the following genera:—*Myophoria* (*M. lævigata* and *M. Goldfussi*), *Hinnites*, *Monotis*, *Avicula* (*A. Bronni*), *Myacites*, *Rissoa*, and many others difficult to determine. The places where the fossils have been found are the following:—On the southern slopes of the Sierra de Gador, in the Rambla del Cañuelo, midway on the road from Felix to Marchal, and in the place named La Solana del Fondon, to the left of the River Andarax, following the track between the mine Sebastopol and the town of El Fondon.—Joaquin Gonzalo Y Xavier."—The Girvan Succession.—Part 1. Stratigraphical, by Charles Lapworth, F.G.S., Professor of Geology in the Mason Science College, Birmingham. The Lower Palæozoic rocks of the neighbourhood of Girvan, in the south of Ayrshire, have long been famous for the remarkable variety of their petrological features and for the abundance and beauty of their organic remains; but the strata are so intermingled and confused by faults, folds, and inversions, that it has hitherto been found impossible to give a satisfactory account of the geological structure of the region. The most remarkable formation in this Girwan area is a massive boulder-conglomerate, several hundreds of feet in thickness, which forms the high ground of Benan Hill, and ranges throughout the district from end to end. Employing this formation as a definite horizon of reference, the author showed, by numerous plans and sections, that it was possible for the geologist to work out the natural order of the strata both above and below this horizon, and to construct a complete stratigraphical and palæontological scheme of the entire Girvan Succession. The development of the palæontological features of the several zones of life in this succession, and the demonstration of their correspondence with the zones already recognised in the synchronous Lower Palæozoic strata of Moffatt, the Lake District, Scandinavia, and elsewhere were reserved by the author for a second part of this memoir.—Notes on the *Annelida tubicola* of the Wenlock Shales, from the washings of Mr. George Maw, F.G.S., by Mr. George Vine. Communicated by Prof. P. Martin Duncan, M.B., F.R.S., V.P.G.S.—Description of part of the femur of *Nototherium Mitchelli*, by Prof. Owen, C.B., F.R.S., F.G.S. The specimen described consisted of the distal portion, probably about one-half, of a femur obtained from Darling Downs, Queensland, and received by the author from Dr. George Bennett. Its principal differences from *Diprotodon* are that it has no depression above the outer condyle, but in its place a rough longitudinal rising for the attachment of the same or of a homologous muscle; and the hinder surface of the condyle is transversely convex. The relative width of the post-condylar fossa resembles that in *Phascolomys;* and a further resemblance to the Wombats consists in the more equal prominence of the lateral boundaries of the rotular surface than in *Diprotodon* and *Macropus*. The bone differs from the corresponding part in the